The other genera are more or less spread in the following districts. From the Helmund river and the eastern portion of Afghanistan, the upper parts of the Oxus, and the eastern portion of Western Turkestan, the Tian Shan or Celestial mountains, and also the Alatau mountains more to the south, they extend along the Himalayan region, certainly as far as the most casterly part of Assam.

These fishes (Schizothoracinæ) are confined to cold regions, as a rule, or at least to localities possessing snow-fed rivers, many of which rivers end in lakes and do not go to the sea. They extend from Eastern Afghanistan and Western Turkestan through Tibet, and the most westerly portion of China, along the Himalayas to the hills in

the Yunnan direction.

Loaches (Nemacheilus) are likewise generally distributed; and it is remarkable, as I have already observed, that all are scaleless. The

same appears the rule in Western Turkestan.

The conclusion, I think, we may fairly arrive at, after examining the fishes of Yarkand and the adjoining countries is, that we find a peculiar group of Carps (Schizothoracinæ) which has spread almost due east and west from the cold and elevated regions of Eastern Turkestan, but of which the southern progress has been barred by

the Himalayas.

If we look to the south we see, as it were, that a wave of tropical forms of fishes has, at a prehistoric period, expanded over that portion of the globe where the Nicobars, Andamans, and the most southern portions of the continent of Asia now are, that this fish-fauna has its northward progress arrested by some cause at or near where the Himalayas now exist and mark the division between the fish-fauna of India and that of Turkestan.

3. Description of new Genera and Species of Phytophagous Colcoptera. By Martin Jacoby.

[Received November 20, 1876.]

Family CRIOCERIDE.

Genus CRIOCERIS, Geoffroy.

1. CRIOCERIS AUSTRALIS, sp. nov.

Oblong, fulvous, fuscous below; head a little darker-coloured than the elytra, finely golden pubescent at its lower half, impunctate at the remainder, convex between the eyes, the frontal oblique grooves feebly impressed and a distinct transverse depression above them; antennæ scarcely half the length of the body, entirely black, with rather short cylindrical joints, the second of which is the shortest, the fifth the longest; thorax coloured as the head, subquadrate, with its anterior half greatly widened, deeply but not largely constricted behind its middle and transversely grooved near the base, smooth and shining; clytra much wider than the thorax, a little

constricted before the middle, of a light fulvous colour, scarcely impressed below the base, with only four or five partly interrupted punctured striæ, of which the first, in shape of an impressed groove, runs parallel with the suture, while the last is only distinctly visible till about the middle of the elytra, the rest of the surface entirely impunctate, and the lateral margin strongly sulcate through its entire length; body beneath dark fuscous, the abdominal segments margined with lighter brown, legs black, the whole covered with golden pubescence.

Length 4 lines. *Hab*. Australia.

Although this species seems closely allied to *C. obliterata*, Baly, by the obliterated striæ on the elytra, it differs in other particulars

sufficiently to justify its classification as another species.

C. obliterata is excavated between the eyes, while in this species this space is convex, and the antennæ entirely black and shorter than half the body; the deep impressions near the lateral border in C. obliterata are here also entirely wanting.

Two specimens are contained in my collection.

Genus Lema.

2. Lema purpurascens, sp. nov.

Elongate, subparallel, subdepressed, shining fulvous, with a purplish hue; head with the front obliquely grooved on each side, covered on the face with yellowish pubescence; labrum, apex of jaws, and eyes black; antennæ half the length of the body, with the second joint half the length of the third, the fourth scarcely longer than the preceding one, the rest elongate, cylindrical, black, with the exception of the first four joints, which are fulvous; thorax with the sides deeply constricted in the middle, and a strongly marked transverse depression near the base, two shallow fovere are also visible on the disk near the lateral depression, surface shining, smooth, with a few punctures near the anterior margin and two longitudinal lines of punctured striæ in the middle; elytra much wider than the thorax, transversely depressed below the shoulder, and constricted longitudinally from the shoulder at the lateral margin towards the middle, each elytron with 10 rows of strong punctures, the first very short; near the apex the punctuation is much deeper, and the intervals assume the form of raised costæ; underside and legs slightly lighter than the upperside, tarsi fuscous.

Length $4\frac{1}{2}$ lines. Hab. Madagascar.

Family Megalopodinæ, Lac. Genus Agathomerus, Lac.

3. Agathomerus dubiosus, sp. nov.

Oblong, fulvous ferruginous above, black beneath. This species

agrees in size, shape, and coloration above entirely with A. rufus, Lac., but differs in the following particulars: in rufus the entire underside and legs are testaceous, with the exception of a few black spots on the abdomen, while in dubiosus these parts are shining black, with the exception of the tibiæ and tarsi, which are ferruginous; in rufus the scutellum is of the same colour as the body, while in dubiosus it is entirely black; and although this species may only be a variety of rufus, I find no mention made of it in Lacordaire's description.

Two specimens from Mexico in my collection.

Family CLYTHRINÆ, Lac. Genus MEGALOSTOMIS, Lac.

4. MEGALOSTOMIS BASILARIS, Sp. nov.

Short, ovate, subdepressed, flavous, sparingly pubescent above. strongly beneath. Head black, pubescent, shining, closely punctate, striated near the eyes, leaving only a narrow space in the middle of the vertex smooth, two large depressions divided by a raised middle line in front of the eyes, the latter light-coloured. dentate from the fifth joint, reaching to the base of the thorax. Posterior angles of thorax indistinct, anterior ones produced, the sides widened from before the middle towards the base, rounded, the median lobe at the base largely rounded; the entire surface closely punctured and covered with whitish pubescence, sparingly on the disk, closely near the sides; two large red spots occupy almost the entire sides, but are partially covered with hairs, and therefore only plainly visible near the base, where the pubescence is less dense. Elytra a little wider at the base than the thorax, closely and confusedly punctate, a little finer near the apex, the punctures showing a tendency to arrange themselves in strice near the suture; the whole surface sparingly covered with stiff whitish hair; exactly on the shoulder of each elytron is a round black spot, the extreme base of the elytra, as well as the sutural line, is also narrowly edged with black. Entire underside reddish, densely covered with white pubescence; femora and tarsi black; tibiæ testaceous.

Length 4 lines. Hab. Peru.

A single specimen in my collection.

5. Megalostomis amazona, sp. nov.

Ovate, of same shape as basilaris, light brownish above, finely pubescent, beneath thickly clothed with yellowish hair; head divided in the middle by a longitudinal raised line, closely punctured and pubescent, posterior margin of epistome dentate, anterior emarginate in middle; jaws and antennæ black, eyes brown; thorax shaped exactly as in the preceding species, densely covered with golden yellow hair, which also extends to the scutellum; elytra about two and a half times the length of the thorax, reddish brown,

finely but closely pubescent, the base, a narrow transverse band in the middle, and a round spot near the apex black.

Length 4 lines. Hab. Amazons.

Two specimens in my collection.

Genus Saxinis, Lac.

b. Saxinis propinqua, n. sp.

Oblong, parallel, shining violet-blue, beneath moderately covered with short whitish pubescence. Head finely and sparingly punctured near the vertex, finely striated round the eyes. Antennæ with the second and third joint fulvous. Thorax broader than long, minutely punctured on the disk, stronger at the sides and base. Scutellum broad, triangular, strongly punctured. Elytra rather deeply punctate-striate, the punctures more crowded near the scutellum, the interstices raised a little and smooth. A bright red spot on each shoulder of a rounded, triangular shape, which does not extend to the lateral margin except at the base, which at that place is perfectly smooth. Legs violet-blue.

Length 2 lines. *Hab*. California.

This species is closely allied to *S. omogera*, Lacord., and also to *S. quadrina*, Lac., but is distinguished from the first by its much finer punctuation of the elytra, and especially of the thorax, by the antennæ having the 2nd and 3rd joints fulvous, and from *S. quadrina* by the different shape of the red shoulder-spot, which is in this species quadrate, while in the species before us, it is smaller and triangular.

7. Saxinis guatemalensis, n. sp.

Oblong, parallel, above dark greenish black, shining, beneath closely covered with white pubescence. Head closely covered with longitudinal striæ, which, towards the mouth only, assume the form of punctures. Thorax much widened in the middle, very convex and everywhere closely covered with distinct punctures, which towards the sides are a little more strongly impressed. Scutellum with a raised middle line also strongly punctured. Elytra very strongly punctate-striate, the intervals between the striæ also distinctly punctured. A large nearly square brick-red spot occupies the shoulders, reaching downwards to about one third of the length of the elytra and transversely to only a short distance from the scutellum. Legs densely covered with white pubescence, through which a coppery reflection is distinctly visible.

Length 3 lines. Collected by Mr. Salvin in Guatemala, at an

elevation of 5000 feet. In my collection.

Family CHLAMYDIDÆ. Genus CHLAMYS, Knoch.

8. Chlamys bartletti, sp. nov.

Ovate, metallic violet-blue; head deeply excavated, strongly but

not closely punctured; labrum, palpi, underside of first joint, as well as the second and third entire joints, of antennæ ferruginous. Thorax with the lateral margin rounded, the posterior deeply sinuate, rugose-punctate, with a high triangular elevation on the middle of its disk, the top of which is divided by a shallow longitudinal channel, the posterior sides at the same time falling off suddenly towards the base of the thorax, and occupied by another small rounded elevation not reaching the lateral margin. Scutellum acute triangular, impunctate. Elytra with the sutural margin dentate almost through its entire length, the surface of each elytron containing three strongly raised curved ridges running nearly in a line with each other, and connected together by short transverse branches and here and there by a network of elevated striae; besides these three large ridges another short one of an S-shape is situated near the suture at the base, and joined to the first ridge in its middle. Body beneath, together with the legs, greenish blue, closely rugosepunctate; last joint of the tarsi ferruginous.

Length 3 lines. Hab. Peru.

This beautiful species, which was discovered by Mr. E. Bartlett during his travels in Peru, is easily separated from others by its brilliant metallic blue, its size, and the markings of its elytra (which approach to a certain extent those of *C. episcopalis*, Lac.), but yet is very different in its general character. The species is in my collection.

9. CHLAMYS UNICOLOR, Sp. nov.

Ovate-oblong, convex, subcylindrical, narrowed behind, upper and underside unicolorous bluish olive-green, not shining. Head with a longitudinal impression; anterior margin of epistome rounded, the entire face strongly punctate; labrum shining fulvous; antennæ either entirely or only the basal joints light brown. Sides of thorax almost straight, converging from base to apex, angles moderately acute; posterior margin not bisinuate but largely waved, median lobe moderately produced, its apex bidentate, as usually in this genus; upper surface closely punctate; a humplike elevation of moderate size is situated on the disk, divided by a shallow channel and surrounded on all sides by another narrow depression; each side of the hump is furnished with 6 tubercles, of which 5 are situated in a semicircle, while the sixth is contained in its middle; scutellum transversely subquadrate, its sides sinuate, narrower at the base than at the apex, hollowed out in its middle, impunctate. Elytra distinctly narrowed from their base towards the apex, sides almost as far lobed as their middle; upper surface coarsely but widely punctate, forming only one regular stria at the sutural margin, which latter is finely dentate from the middle to the apex; transverse irregular costæ and a few tubercles are placed without order on the disk of each elytron. Underside deeply impressed with numerous round large punctures, which, however, extend to the legs only sparingly.

Length 2 lines.

Hab. Amazons.

The peculiar olive-green colour, as well as the small size and the position of the tubercles on the thorax, will distinguish this species at first sight from others.

10. CHLAMYS PALLIDA, sp. nov.

Ovate, narrowed in the middle, above pale testaceous mixed with brown. Head testaceous, with the upper portion of a darker brown closely and rather deeply punctate; flat, without any depressions; apex of jaws black, labrum brown shining; antennæ entirely ferruginous brown. Thorax mounted at its posterior half by a rather high elevation of a triangular shape very nearly of the same form as in C. bartletti, but divided by a wider channel, the edges of which are strongly sinuate-rugose; a patch on each side below the elevation, as well as seven small spots arranged in a half-circle in the middle of the thorax, dark brown; the whole surface deeply pitted with brownish punctures, nearly the entire posterior margin dentate, of a black colour; scutellum pale testaceous, with acute posterior angles, impunetate. Elytra deeply punetate, confused-reticulate at their posterior half, the punctures from the base to the middle of a deep brown, from there of a lighter colour; a distinct costa or ridge runs from the base in a curved line towards the apex, not quite reaching the latter, sending off a short branch from the third part of its length towards the base between the shoulder and the first ridge; another short elevation exists close to and a little beneath the scutellum; the entire apical region punctate-reticulate, and the sutural margin dentate nearly through its entire length. Body beneath of the same colour as the elvtra; a rounded spot of a ferruginous colour is situated on the abdomen close to the margin of the elytra, while the legs in their middle also bear a patch of the same colour, which occupies the tarsi and claws entirely; the whole undersurface deeply punctured,

Length 3 lines. Hab. Amazons. In my collection.

11. CHLAMYS EXCAVATA, sp. nov.

Oblong, subcylindrical, narrowed behind, above entirely ferruginous, below testaceous; head deeply punctate, the punctures of a more or less dark brown colour, labrum fulvous shining, jaws black; basal joints of the antennæ ferruginous, the rest fuscous; thorax raised gradually to a hump-like elevation of a rounded shape, the top of which is divided by a shallow depression, the entire surface closely rugose-punctate, the punctures a little less crowded near the sides; scutellum bisinuate, smooth. Elytra with an excavated space of a dark fuscous colour reaching from the base near the scutellum to nearly the middle of their disk, the commencement and the end of which is marked by a short pointed tubercle; exactly in the middle of each elytron is another fovca of an oblique direction towards the shoulders; the entire surface confusely punctate-rugose,

the sutural margin dentate in the same way as the preceding species; pygidium much more widely punctured, the interstices plane, and a little shining. Legs and tarsi of the same colour as the underside; claws fuscous.

Length $2\frac{1}{2}$ lines. Hab. Amazons. In my collection.

Family EULMOLPINE. Genus Chalcophyma, Baly.

12. CHALCOPHYMA STRIATUM, sp. nov.

Subquadrangular, rounded behind, cupreous or dark greenish; antennæ, labrum, and tarsi light testaceous. Head very finely striate, the striæ all running towards a depression in the middle of the head; forehead rather widely punctate, closer towards the lower portion of the face. Thorax widened in the middle, the lateral margin bidentate, impressed with very deep punctures, which are more crowded along the anterior margin, leaving an elevated space exactly in the middle of the base either perfectly smooth or with one or two impressions. Scutellum semiovate, impunctate and shining, Elytra either dark cupreous or greenish with a purple reflection round their edges each elytron with five or six elevated and interrupted ridges on its surface, the space between which is deeply punctured, the punctuation terminating in regular striæ towards the apex. Body beneath black; the legs sometimes dark bluish, or copper-coloured; posterior femora near their apex with a distinct triangular tooth.

Length $2-2\frac{1}{2}$ lines. Hab. Amazons. In my collection.

13. CHALCOPHYMA TUBERCULATUM, sp. nov.

Subquadrate, bronze-coloured. Head closely punctured, finely striate; antennæ very slender, with the first six joints flavous, the rest fuscous. Thorax deeply rugose-punctate, as well as two large elevations on the middle of its disk; several smaller rugosities are situated near the sides, but are impunctate. Scutellum closely punctured. Elytra deeply rugose and impressed with large punctures and transverse raised striae, besides which each elytron is also furnished with a number of longitudinal short tubercules, which are situated as follows, viz. one on the shoulder, and a second below it in an oblique direction, four at a little distance from the shoulder running down towards the apex, and two other rows closer towards the suture, running parallel with the last one. Legs rather long for this genus, ferruginous, as well as the last abdominal segments.

Length $2\frac{1}{4}$ lines. Hab. Cayenne. In my collection.

14. CHALCOPHYMA RETICULATUM, sp. nov.

Subquadrate, rounded behind, dark purplish or violet; head marked exactly in the same way as in *C. striata*; antennæ flavous; thorax of the same shape as in the preceding species, deeply and closely punctate, the intervals between the punctures raised and forming a network in a longitudinal direction; towards the sides are some deeper and larger impressions; scutellum smooth, shining; elytra with a number of indistinct elevated costae, between which the space is deeply punctate and rugose. Legs red brown.

Length $2\frac{1}{4}$ lines. Hab. Amazons.

This species is sufficiently distinguished from *C. striata* by the reticulate sculpture of the thorax, and the much more numerous costæ on the elytra, which are only now and then interrupted, but extend in two or three instances through the entire length of the elytra.

Genus Typophorus, Erichson.

15. Typophorus mexicanus, sp. nov.

Ovate, convex, above violet-blue, beneath black with a green tinge. Head reddish brown, finely and sparingly punctured, with a distinct triangular groove at its lower half, and a deep curved depression above each eye; jaws dark brown; antennæ more than half the length of the body, with the first three or four joints reddish, the rest black, covered with whitish pubescence. Thorax of the same colour as the head, with the posterior and lateral margin evenly rounded, the anterior widened in the middle, impressed in the same way as the head, with minute punctures only visible under a strong lens; scutellum broader than long, impunctate. Elytra of about double the length of the thorax, with their sides nearly parallel, violet-blue, impressed with ten rows of punctures, which diminish a little in size towards the apex; below the shoulder is a short transverse depression, usually to be found amongst this genus. Legs and tarsi coloured as the underside.

Length 21 lines.

Collected by Mr. O. Salvin at Guatemala. In my collection.

16. Typophorus melanocephalus, sp. nov.

Ovate, moderately convex, metallic green or blue. Head greenish black, strongly and closely punctured; antennæ long and slender, with the first five or six joints fulvons, the rest dark brown. Thorax red, a little more strongly punctured than in T. mexicanus; otherwise of same shape; the middle of the anterior margin is marked with a short greenish patch which seems to be a continuation of the eoloration of the head. Elytra very strongly punctate-striate, with the usual transverse depression below the shoulder. Underside and legs black.

Length 3 lines. Hab. Mexico.

Although this insect is at the first view only distinguished from the preceding species by its larger size, the above details, especially the strong punctuation and dark colour of the head, I think, justifies the making it a distinct species, moreover as all the specimens in my collection agree exactly in every particular.

17. Typophorus humeralis, Baly, var. rufa.

Ovate, convex, base of the antennæ fulvous. Head, very convex and shining, finely punctured, together with the thorax black. Elytra unicolorous, rufous, which colour extends sometimes over the entire thorax.

Length $2\frac{1}{2}$ lines. Hab. Guatemala.

Collected by Mr. Salvin.

As this species agrees in every thing with *T. humeralis* of Dr. Baly (described in the Annals of Natural History, 1859), except the coloration, I consider it a mere variety of this species, which, to my knowledge, has not yet been described.

18. Typophorus quadriplagatus, sp. nov.

Ovate, moderately convex, light flavous. Head without a groove near the eyes, which are rather closely approximated, strongly punctate on the vertex, flavous; antennæ of the same colour, with the exception of two or three middle joints, which are a little darker. Thorax of the usual shape, strongly but not closely punctured. Elytra a little narrower at the base than behind the middle, with ten rows of strongly punctured striæ; the intervals slightly raised, of a light flavous colour; each elytron ornamented with two black spots, viz. one on the extreme margin a little before the middle, and a second larger one in the middle, exactly between the margin and the suture. Underside dark brown, as well as the last third of the femora; the rest, with the legs and tarsi, testaceous.

Length 2 lines. *Hab*. Amazons. In my collection.

19. Typophorus minutus, sp. nov.

Ovate, convex, black-brown, shining. Head very convex, without any trace of a transverse groove, but with a slight depression in the middle, upper part distinctly and closely punctured; first five joints of antennæ flavous, the rest black. Thorax nearly as long as broad, with the sides much contracted towards the anterior margin, and the posterior one a little sinuate, more or less distinctly punctured, scutellum oblong, smooth. Elytra strongly punctate-striate; the first striæ assuming the form of a continuous line towards the apex and parallel with the suture. Underside and legs black.

Length 2 lines. Hab. Rio Janeiro. In my collection.

By its minute size and the uniform coloration of all the parts, which

now and then and in certain lights assumes on the head and thorax a lighter brown, this species is sufficiently distinguished from others.

Family CHRYSOMELIDÆ. Genus Doryphora, Illig.

20. Doryphora Rugosa, sp. nov.

Oblong-ovate, rounded and widened in the middle, very convex towards the first third of the elytra, then falling off abruptly towards Above blackish blue, variegated with testaceous, below black, shining. Head deeply and closely covered with punctures which run together towards the epistome, with a longitudinal middle groove through its entire length. Antennæ rather longer than the thorax, robust, black, shining, with the third joint the longest and thinnest. Thorax with the lateral margin slightly rounded and the posterior one sinuate, punctured in the same way as the head, on its surface more strongly towards the sides, these latter excavated and flattened and accompanied by a fulvous narrow band, which is much hollowed out at its inner margin. Scutellum impunctate. Elytra broader than the thorax, everywhere covered with rugosities and deep impressions distinctly visible to the naked eye; a narrow dentated band of testaceous colour extends across the middle from one side to the other, sending upwards three or four branches of the same colour towards the base; while the posterior half of the elytra is variegated in the same way, more strongly visible near the suture. The mesosternal process comparatively short and straight.

Length 8 lines. Hab. Columbia.

In the collection of Dr. Baden, in Altona, and my own.

21. Doryphora costata, sp. nov.

Ovate, very slightly widened behind, very convex towards the first half, then suddenly falling off towards the apex, above dark brown, a little shiping, beneath black. Head and thorax without gloss; the first with a rather deep longitudinal impression before the anterior margin of the eyes, a transverse groove between the antennæ, and a few scattered punctures here and there; labrum brown, shining; antennæ not reaching quite to the base of the thorax, light flavous, the first joint much thickened, almost cylindrical, the second very short, the third the longest, double the length of the fourth, the rest thickened, cylindrical. Thorax with the sides straight and parallel, the anterior corners rounded and produced into a point reaching slightly above the eyes; posterior margin slightly sinuate, anterior straight in middle, with a distinct margin which extends also to the sides, where it is, however, very narrow. The surface impressed with a few strong punctures, which are a little more numerous towards the sides. Elytra wider at the base than the thorax, assuming their greatest convexity exactly at the middle, from there suddenly declining to the apex; each elytron with ten rows of elevated ridges, of which the first and second are united at a little

distance from the base, and the sixth and seventh at a short distance from the apex; all the interstices between the ridges deeply impressed with shining green punctures. Legs and tarsi brown. The mesosternal process is much developed, slightly curved and pointed.

Length 7 lines; width 5 lines.

Hab. Columbia.

This beautiful insect was collected by Mr. Wallis, and is in the collection of Dr. Baden, in Altona, and my own.

Ensiforma, nov. gen.

Elongate, parallel; head small, perpendicular; eyes convex, small; palpi clavate, with a short acute terminal joint; antennæ as long as the body, with the first seven joints (the second excepted) slender, elongate-triangular, the next three greatly widened at their apex and broadly flattened, the terminal joint long, and pointed at the apex. Thorax subquadrangular, narrowed towards the base, the angles obtuse; scutellum broad triangular. Elytra wider at the base than the thorax, the sides parallel, punctate-rugose at the surface. Femora and tibiæ of equal length and size, the first but little widened in the middle; tarsi with the first joint as long as the two following joints together; claws bifid.

Type Ensiforma cærulea, sp. nov.

This genus, which bears a close affinity to the genus *Diabrotica*, will be easily distinguished from that and other genera by the extreme length of the antennæ and their flattened terminal joints.

22. Ensiforma cærulea, n. sp.

Elongate, parallel, dark blue above, fuscous below; the head, thorax, the scutellum, and legs flavous. Head transversely grooved. between the eyes joined by a short longitudinal groove in the middle of the face; first four joints of antennæ fuscous above, flavous beneath, the other joints entirely dark brown; eyes black. Thorax with the anterior and posterior margins nearly straight, slightly narrowed from behind the middle to the base, the angles obtuse; above but little convex, with two shallow depressions on the disk near the sides, shining, together with the scutellum impunctate. Elytra a little broader at the base than the thorax, distinctly margined from the shoulder towards the apex; closely punctate and partially transversely rugose, of a dark bluish green colour surrounded at the sides by a narrow light flavous margin, which widens a little at the extreme apex; another short streak of the same colour is situated on each elytron between the shoulder and the scutellum. Underside, the breast excepted, fuscous, as are also the fore legs and posterior femora; tibiæ and tarsi of the last two pair of legs dark brown, covered, as well as the whole underside, with yellowish and rather long hair.

Length 4 lines. *Hab*. Brazil.

One specimen in my collection.